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FIFTH
ANNUAL REPORT

BY THE
MEDICAL OFFICER OF HEALTH

ON THE
*Health and Sanitary Conditions of the
County of Aberdeen*

FOR THE YEAR

1929.

ABERDEEN:
PRINTED BY G. CORNWALL & SONS.

1930.

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CONTENTS.

Statistical Summary	PAGE
Introduction	5
	7

SECTION I.

GENERAL PUBLIC HEALTH OF THE DISTRICTS.

1. Vital Statistics	9
2. Morbidity and Mortality from Infectious Diseases—	
(a) <i>Notifiable Infectious Diseases—</i>	
Scarlet Fever	10
Diphtheria	13
Prevention of Diphtheria and Scarlet Fever	14
Typhoid and Para-Typhoid Fevers	14
Acute Poliomyelitis	15
Encephalitis Lethargica	15
Cerebro-Spinal Fever	16
Acute Infective Jaundice	16
Chicken-pox	16
Pneumonia	16
(b) <i>Non-notifiable Infectious Diseases—</i>	
Measles, Whooping Cough, and Mumps	17
3. Housing	17
4. Disinfections	20
5. Factory and Workshops Act	20

SECTION II.

THE HEALTH OF THE BURGHS.

Vital Statistics	21
Incidence of the Commoner Infectious Diseases	22
Housing	22

SECTION III.

MATERNITY AND CHILD WELFARE SERVICES.

Births and Birth-rates	24
Infantile Mortality	24
Maternal Mortality	25
Ophthalmia Neonatorum	26
Educational Measures	27

SECTION IV.

SCHOOL MEDICAL SERVICES.

The Physical Condition of the School Children	28
Treatment of Disease in School Children	28
(1) Dental Defects	32
(2) Defective Vision	32

SECTION V.

TUBERCULOSIS SERVICES.

Statistics	34
Treatment—	
(1) Institutional Treatment	36
(2) Domiciliary Treatment	38
(3) Dispensary Treatment	39

	SECTION VI.	PAGE
NURSING SERVICES	... ..	40
	SECTION VII.	
THE TREATMENT OF VENEREAL DISEASES	... ..	42
	SECTION VIII.	
BACTERIOLOGICAL SERVICES	... ..	44
	SECTION IX.	
VETERINARY SERVICES	... ..	49

STATISTICAL SUMMARY

(For the Districts and all the Burghs, unless otherwise stated).

	Districts.		Burghs.		Total.
1. Acreage,	1,251,735	...	3,917	...	1,255,652
2. Population, (As estimated to the middle of 1929.)	110,127	...	38,576	...	148,703
3. Density of population per acre,	·088	...	9·8	...	·12
4. Birth-rate, (Excluding Peterhead and Fraserburgh.)	20·3	...	18·7	...	20·1
5. Infantile Mortality, (Excluding Peterhead and Fraserburgh.)	76·03	...	44·5	...	72·3
6. Death-rate, (Excluding Peterhead.)	13·3	...	14·5	...	13·5

4, ALBYN PLACE,
ABERDEEN, 30th September, 1930.

*To the Department of Health for Scotland,
and to the Council of the County of Aberdeen.*

MY LORDS, LADIES AND GENTLEMEN,

I beg herewith to submit my Fifth Annual Report for the year ending 31st December, 1929. Since that date numerous administrative changes have been effected by the Local Government (Scotland) Act, 1929, which came into operation on 16th May, 1930, when the Joint Committee for Public Health Services ceased to exist.

This Report deals with the Health and Sanitary Conditions of the County of Aberdeen and of its constituent Burghs, with the exception of the Burgh of Peterhead. There are also incorporated Reports by the County Veterinary Inspector on the operation of the Milk and Dairies (Scotland) Act, 1914, and by the County Bacteriologist.

Amongst the outstanding features are the decreases in the marriage and birth rates. The infantile mortality was also, unfortunately, greater; it was 76·03 in 1929, as against 64·6 in 1928.

With regard to the ordinary zymotic diseases, there was a diminution in the incidence of Scarlet Fever, but an increase in Diphtheria and the Typhoid Fevers.

Special attention is drawn to the Section of the Report which deals with Housing. During the year under review much advantage has been taken in several of the Districts of assistance offered by the Housing (Rural Workers) Act, 1926, which is really the only Housing Act that has tended to conserve housing in rural areas and thus to prevent rural depopulation.

One important matter which the Public Health Committee of the County Council has been considering is the concentration of the Infectious Diseases Hospitals in the County. There are at present 12 such Hospitals, and, in the interests of efficiency in medical and nursing care and of economy, this number must be cut down. The Committee in coming to a decision on the question of concentration will be guided by the necessity for considering the general needs of the whole County and not the particular needs of any part of it.

I should like to put on record the devotion to duty and goodwill shown by the members of the staff during a difficult period of transition.

I am,

MY LORDS, LADIES AND GENTLEMEN,

Your obedient servant,

HARRY J. RAE,

Medical Officer of Health.



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Section I.

GENERAL PUBLIC HEALTH OF THE DISTRICTS.

1.—VITAL STATISTICS.

Population.

The last three censuses were taken in 1901, 1911, and 1921, and the population of the eight Districts of the County as then ascertained was as follows:—

Population in 1901 was	.	.	.	.	.	124,007
„ 1911 „	.	.	.	.	.	119,209
„ 1921 „	.	.	.	.	.	113,567

In the twenty years from 1901 to 1921, the actual fall in the population amounted to 10,440. The population, as estimated by the Registrar-General to the middle of 1929, was 110,127, an increase of 4,414, as compared with the estimated intercensal population of 1928. The estimated population is usually further from the true figure the longer the interval that has elapsed since the last census. Since 1921 there has been an estimated decrease in each of the Districts, and the amount of these decreases, amounting to 3,440, are shown in Table I.

TABLE I.

District.	Population at 1921 Census.	Estimated decrease at middle of 1929.
Deer,	27,177	... 883
Ellon,	13,311	... 385
Garioch,	12,490	... 644
Deeside,	12,037	... 119
Turriff,	10,684	... 427
Aberdeen,	22,777	... 42
Alford,	8,668	... 585
Huntly,	6,423	... 355
Total,	113,567	... 3,440

There was a natural increase of population in 1929 of 7,762, as compared with 905 in 1928. The term “natural increase” means the excess of births over deaths during the year.

Marriages.

In 1929, 483 marriages were registered, as against 476 in 1928. The marriage-rate—the number of marriages per 1,000 of population—was 4·4, as compared with 4·5 in 1928.

Births.

After making correction for inward and outward transfers, there were 2,236 births. Of these, 1,193 were males and 1,043 were females. In 1929, there were 84 fewer births than in 1928.

The Scottish birth-rate in 1929 was 19 per thousand, and the County birth-rate was 20·3. The County birth-rate was 21·9 in 1928, 21·2 in 1927, 23·02 in 1926, 22·02 in 1925, and 22·3 in 1924.

With regard to legitimacy, 388 of the 2,236 births were illegitimate. The illegitimate birth-rate was thus 17·3 per 100 births; in 1928, it was 17·5; in 1927, 16·04; in 1926, 14·5; and in 1925, 15·3.

Deaths and Death-rate.

Making correction for transfers, we find that the deaths amounted to 1,460—735 males and 725 females. This represents a death-rate of 13·3 per thousand of estimated population, as compared with 13·4 in 1928.

The total number of deaths registered in Scotland in 1929 was 70,917, which represents a death-rate of 14·5 per thousand.

Causes of Death.

The principal causes of death, with the number of deaths attributable to the various well-defined diseases or groups of diseases, are given hereunder :—

Organic disease of the heart and blood vessels	478 deaths.
Respiratory diseases— (Excluding tuberculosis and influenza.)	
Pneumonia	81
Bronchitis	65
Other lung diseases	11
	157 „
Cancer	143 „
Tuberculosis—	
Pulmonary	54
Non-pulmonary	25
	79 „
Kidney disease	38 „
Chief epidemic diseases—	
Diarrhœa and Enteritis	14
Whooping Cough	11
Diphtheria	5
Measles	—
Scarlet Fever	6
Enteric Fever	3
	39 „
Appendicitis	20 „
Influenza	36 „
Puerperal Sepsis	3 „
Diseases of early infancy and malformations	91 „
Violence	64 „

The outstanding features in the causes of death, as compared with 1928, are :—

- (1) 43 more deaths from organic disease of the heart and blood vessels—the most common cause of death.
- (2) 23 more deaths from influenza, which was also present in epidemic form in the City of Aberdeen in 1929.
- (3) 29 fewer deaths from tuberculosis. There was a marked diminution in the number of deaths both from pulmonary and non-pulmonary tuberculosis.
- (4) A slight increase in the number of deaths from cancer. The Scottish death-rate from cancer was 145, whereas the County rate was 130.

2.—MORBIDITY AND MORTALITY FROM INFECTIOUS DISEASES.

(a) Notifiable Infectious Diseases.

SCARLET FEVER.

The number of cases of scarlet fever notified in the Districts and Burghs during the past five years was as follows :—

1929	356 cases.
1928	577 „
1927	603 „
1926	627 „
1925	398 „

In 1926, there occurred a marked increase in the number of scarlet fever cases; the actual number in the Districts only was 536, as compared with 341 in 1925 and 244 in 1924. In 1927 and 1928, there was a slight reduction but the cases still exceeded the 500 mark. In 1929, the slight downward tendency of the two preceding years became accentuated into a steep decline to a total of 313 cases. The figures for the Burghs showed a similar and synchronous sharp rise and steep fall.

Age Incidence.—From the Districts, there were 313 notifications, and, of these, 180 or 58 per cent. were of school age, and 51 or 16 per cent. belonged to the pre-school period. The ages of the notified cases are given in Table II.

TABLE II.
SCARLET FEVER.
Age Incidence of Cases (Districts)

Districts.	Under 1 year.	1-5.	5-15.	15-25.	25-45.	45-65.	Over 65.	Total.
Deer . . .	—	4	29	9	2	1	—	45
Ellon . . .	2	7	26	4	5	—	—	44
Garioch . . .	—	11	18	12	8	3	—	52
Deeside . . .	—	1	4	1	2	—	—	8
Turriff . . .	—	3	13	2	—	1	—	19
Aberdeen . . .	—	10	38	11	7	—	1	67
Alford . . .	—	7	42	4	3	3	—	59
Huntly . . .	—	6	10	1	2	—	—	19
Totals . . .	2	49	180	44	29	8	1	313
Percentage . . .	·64	15·65	57·5	14·05	9·3	2·5	·32	—

Seasonal Prevalence.—In the Districts, scarlet fever was especially prevalent during the last four months of 1928. The relatively high incidence was maintained in the beginning of 1929, the greatest number of cases being notified in May. During the remainder of the year, few cases occurred either in the Districts or Burghs.

Table III. shows the monthly incidence in the Districts and Burghs.

TABLE III.
SCARLET FEVER.
Monthly Incidence of Cases (Districts and Burghs).

Month.	Districts.		Burghs.		Total.
January	44	...	8	...	52
February	30	...	3	...	33
March	35	...	5	...	40
April	29	...	4	...	33
May	60	...	1	...	61
June	19	...	3	...	22
July	4	...	5	...	9
August	14	...	—	...	14
September	20	...	5	...	25
October	23	...	4	...	27
November	10	...	4	...	14
December	25	...	1	...	26
Total	313	...	43	...	356

Hospital Treatment.—Of the 356 cases notified during the year under review, 322 or 90·4 per cent. were treated in Infectious Diseases Hospitals.

Table IV. gives particulars relating to the cases that were treated institutionally. The number of days in hospital per completed case was 42·7: in 1928, it was 41·1.

TABLE IV.
SCARLET FEVER.
Hospital Treatment.

Hospital.	Area Served.	Cases Notified.	Admissions to Hospital.	Period of Institutional Treatment in Days, per Completed Case.	Number Discharged during Year.	Number of Days in Hospital per Completed Case.	Number of Deaths.	Death-Rate per 100 Cases.
Strichen .	Deer District; Rose-hearty Burgh	51	44	2,216	52	42·6	1	2·3
Ellon .	District and Burgh	46	40	1,557	35	44·4	—	—
Inverurie .	District of Garioch and Burghs of Inverurie, Kintore and Oldmeldrum	71	55	3,761	75	50·1	—	—
Aboyne .	Deeside District	8	14	949	19	50	1	7·1
Turriff .	District and Burgh	19	19	890	21	42	—	—
Summerfield .	Aberdeen District	67	70	2,507	77	32·5	2	2·9
Alford .	District . . .	59	44	2,601	56	46·4	—	—
Huntly .	District and Burgh	25	26	620	18	34·4	1	3·8
Ballater .	Burgh . . .	—	—	—	—	—	—	—
Fraserburgh .	Burgh . . .	10	10	499	12	41·5	—	—
Braemar .	—	—	—	—	—	—	—	—
Total .		356	322	15,600	365	42·7	5	1·5

Mortality.—The deaths from scarlet fever numbered 5, giving a death-rate of '03 per 1,000 of population at all ages and a case mortality of 1·4 per cent.

DIPHTHERIA.

There was a marked increase in the number of diphtheria cases. The cases notified numbered 263, the corresponding figure for 1928 being 109. Aberdeen District showed an increase of 33 cases and the Deer District an increase of 15 cases. The Burghs, however, suffered much more severely than the Districts.

Tables V., VI., and VII. show the age incidence, the monthly incidence, and particulars relating to hospital cases respectively.

TABLE V.

DIPHTHERIA.

Age Incidence of Cases (Districts).

Districts.	Under 1 Year.	1-5.	5-15	15-25.	25-45.	45-65	Over 65	Total.
Deer . . .	—	2	27	16	4	2	1	52
Ellon . . .	—	2	6	3	—	—	—	11
Garioch . . .	—	1	6	1	4	—	—	12
Deeside . . .	—	—	1	—	—	—	—	1
Turriff . . .	1	2	5	1	1	—	—	10
Aberdeen . . .	1	3	19	12	4	1	—	40
Alford . . .	—	—	2	—	—	—	—	2
Huntly . . .	—	—	—	—	—	—	—	—
Totals . . .	2	10	66	33	13	3	1	128
Percentage .	1·6	7·8	51·6	25·8	10·2	2·3	·8	100

TABLE VI.

DIPHTHERIA.

Monthly Incidence (Districts and Burghs).

Month.	Districts.		Burghs.		Total.
January	13	...	39	...	52
February	16	...	8	..	24
March	19	...	6	...	25
April	12	...	3	...	15
May	14	...	1	...	15
June	9	...	4	...	13
July	8	...	5	...	13
August	7	...	2	..	9
September	3	...	1	...	4
October	8	...	13	...	21
November	8	...	25	...	33
December	11	...	28	...	39
	—		—		—
Total	128	..	135	...	263

TABLE VII.
DIPHTHERIA.*Hospital Treatment.*

Hospital.	Cases Notified.	Admissions to Hospital.	Period of Institutional Treatment in Days, per Completed Case.	Number Discharged during Year.	Number of Days in Hospital per Completed Case.	Number of Deaths.	Death-rate per 100 Cases.
Strichen .	55	52	1,557	62	25	—	—
Ellon .	13	13	263	9	29	—	—
Inverurie .	30	29	457	22	20·7	2	3·4
Aboyne .	1	2	28	2	14	—	—
Turriff .	10	10	204	9	22·7	1	10
Summerfield .	40	42	936	36	26	4	9·5
Alford .	2	1	25	1	25	—	—
Huntly .	—	—	—	—	—	—	—
Ballater .	—	—	—	—	—	—	—
Fraserburgh .	112	111	2,423	102	23·7	—	—
Bracmar .	—	—	—	—	—	—	—
Total .	263	260	5,893	243	24·2	7	2·7

Mortality.—There were 7 deaths amongst the 263 cases, as against 6 in 1928. The case mortality was 2·7 per cent. In 1928, the case mortality was 5·5.

Active Immunisation against Scarlet Fever and Diphtheria.

Testing, with subsequent active immunisation of those found to be susceptible to scarlet fever and diphtheria, was carried out at several of the public schools. Full details as to technique have been given in previous Reports and our experience of the last five years tends to prove that active immunisation against diphtheria is a valuable prophylactic measure, but that similar measures against scarlet fever have not so far met with the same satisfactory results. 354 children were tested for first time; 460 children were immunised against diphtheria or scarlet fever or both. The beginners were immunised without previous testing. The schools visited for this purpose were—Bucksburn, Dyce, Stonewood, Whitestripes, Denmore, Bridge of Don, Newmachar, Alford, and Gallowhill.

TYPHOID AND PARA-TYPHOID FEVERS.

In 1929, there were 40 notifications of typhoid and para-typhoid fever with 3 deaths, as against 16 notifications in 1928, with 2 deaths. The distribution of the cases was as follows:—

Deer District	28 cases.
Huntly „	2 „
Ellon „	2 „
Garioch „	1 case.
Rosehearty Burgh	5 cases.
Fraserburgh „	2 „
<hr/>	
Total	40 „
<hr/>	

The number of notifications and deaths in each year since 1914 is given in Table VIII.

TABLE VIII.

YEAR.	Notifications.	Deaths.	Percentage Case Mortality.
1914	25	3	12
1915	19	4	21
1916	17	—	—
1917	22	4	18·2
1918	26	4	15·4
1919	16	3	18·8
1920	28	2	7·1
1921	23	4	17·4
1922	19	1	5·3
1923	13	1	7·7
1924	3	—	—
1925	22	2	9·1
1926	3	—	—
1927	22	1	4·5
1928	16	2	12·5
1929	40	3	7·5
Totals	314	34	10·8

Thirty-three of the 40 cases suffered from typhoid fever and the remaining 7 from para-typhoid B.

It will be observed that the number notified in 1929 exceeded that of any year since 1914, but that the case mortality is low. The increased incidence was largely due to an outbreak associated with a milk supply in a village in the Deer District. As the whole of the dairyman's family were affected practically simultaneously, change of milkers would have been of no avail, and the milk supply was therefore stopped. The recurrent outbreaks of typhoid fever in this village have been traced to "carriers" of the intermittent type.

ACUTE POLIOMYELITIS (INFANTILE PARALYSIS).

In the Annual Report for 1928, details were given of an outbreak of infantile paralysis in Fyvie, and a history was also given of previous local outbreaks.

In 1929, one case of infantile paralysis was notified, the patient being a child of 19 months. The case was admitted to the City Hospital where lumbar puncture was performed, and the cerebro-spinal fluid gave typically positive results, viz.:—(1) increase in the number of mononuclears; (2) increase of globulin; and (3) Colloidal Gold Reaction—positive.

The child was treated in hospital for nine months and made a good recovery.

ENCEPHALITIS LETHARGICA (SLEEPY SICKNESS).

Encephalitis lethargica, epidemic encephalitis or sleepy sickness, was made a compulsorily notifiable disease in 1925. The number of cases brought to the notice of the Health Departments of the County and City of Aberdeen since 1921 are shown in the following table:—

TABLE IX.

Year.	County.	City.
1921,	0 . . .	3
1922,	1 . . .	0
1923,	3 . . .	0
1924,	2 . . .	7
1925,	2 . . .	9
1926,	2 . . .	0
1927,	4 . . .	1
1928,	0 ..	4
1929,	2 . . .	3
Total, . . .	16 . . .	27

Two cases of encephalitis lethargica were notified during 1929. One, a male aged 18 years, belonging to the Deeside District, was notified after admission to a City institution where he was treated for 13 months and was ultimately discharged "unrelieved." The other case, from the Alford District, was a man of 27 years; he was admitted to the City Hospital and made a good recovery.

In its acute stage, the disease is regarded as infectious, and institutional accommodation for acute cases should be provided in the ordinary Infectious Diseases Hospitals. Over three years ago, a limited number of beds were set aside in Stobhill Hospital, Glasgow, for the reception of cases suffering from the after-effects of this disease which, in its later stages, is only slightly, if at all, infectious. This arrangement with Stobhill Hospital has now lapsed, each Local Authority being required to make institutional provision for its own cases. No cases of this type from the County have received institutional treatment.

CEREBRO-SPINAL FEVER.

ACUTE INFECTIVE JAUNDICE.

No case of either of these diseases was reported.

ERYSIPELAS.

Eighty-nine cases were notified, as compared with 75 in 1928. Seventeen cases were treated in Infectious Diseases Hospitals. There were no deaths.

SMALL-POX.

No case or suspected case of small-pox was brought to the notice of the Public Health Department.

CHICKEN-POX.

Chicken-pox continues to be a notifiable disease until the end of 1930, in terms of the Public Health (Chicken-pox) Amendment Regulations (Scotland) Act, 1928.

In 1929, 337 cases were notified, as compared with 179 in 1928. None of the cases required institutional treatment.

PNEUMONIA.

Acute primary and acute influenzal pneumonia are notifiable under the Public Health (Pneumonia, Malaria, Dysentery, &c.), Regulations (Scotland), 1919. Broncho-pneumonia, if acute and primary, is also a notifiable disease.

The number of cases notified in all the Districts and Burghs, excepting Peterhead, was 442. These may be classified thus:—

1. Acute primary pneumonia	158
2. Acute influenzal pneumonia	43
3. Acute primary broncho-pneumonia	112
4. Acute pneumonia (type not specified)	129
	<hr/>
	442
	<hr/>

The number of cases notified in 1928 was 338; in 1927, 346; in 1926, 207; and in 1925, 154.

Of the 442 notified cases, 102 died, representing a percentage case mortality of 24, as compared with 30·2 in 1928. Of the 102 deaths, 17 occurred in children under one year of age, and 9 in children between 1 and 5 years. Thus, 26 deaths or 25·5 per cent. of the total deaths, occurred in children under five years of age.

In previous Annual Reports, full particulars have been given of the institutional provision made by the County Council for cases of pneumonia. Pneumonia patients may now be sent by general practitioners through the Medical Officer of Health to the following institutions:—

1. Woodend Hospital, Aberdeen.
2. Inch and District War Memorial Hospital, Inch.
3. Huntly Jubilee Cottage Hospital, Huntly.
4. Fyvie Cottage Hospital, Fyvie.
5. Kincardine O'Neil War Memorial Hospital.

Excluding cases treated in the Aberdeen Royal Infirmary and Sick Children's Hospital, 82 cases of pneumonia from the County received institutional treatment, as compared with 44 in 1928.

The Pneumonia Scheme also provides for domiciliary nursing, and, in 1929, 4 cases had the services of special pneumonia nurses supplied by the Public Health Department.

MALARIA.

No cases were notified.

DYSENTERY.

Eleven cases of dysentery were notified, as against one case in 1928. Three cases were treated in the Aberdeen City Hospital, 1 in Inverurie Infectious Diseases Hospital, 1 in Kingseat Mental Hospital, and 1 in the Sick Children's Hospital. The remaining cases were treated at home.

(b) Non-notifiable Infectious Diseases.

The three principal non-notifiable infectious diseases are measles, whooping cough, and mumps.

Measles was prevalent, chiefly during May, September, and October, in the Turriff and Deer Districts. One hundred and fifty-three cases were brought to the notice of the Public Health Department by Head Teachers. The fatal complication in this disease is broncho-pneumonia. There were no deaths from measles.

Whooping cough was most prevalent in August, September, and October. Sixty-six cases were brought to our notice, but there were 21 deaths from this disease. The death-rate was thus 14 per 1,000 of population. This includes all Districts and Burghs.

Eighty cases of mumps were reported.

3.—HOUSING.

During the last four years there has been a marked increase in the provision of new houses.

		New Houses.		In course of erection at end of year.
1926	. . . . .	124	...	69
1927	. . . . .	111	...	107
1928	. . . . .	149	...	70
1929	. . . . .	169	...	33

The number of new houses completed in 1929, or in course of erection at the end of the year, per 1,000 of population, is shown—along with other data relating to each District—in Table X. With regard to new houses, Aberdeen

District again leads with a rate of 3·7. Garioch and Deeside Districts come next with 1·8 each, then Huntly with 1·6, Alford with 1·4, Ellon with 1·3 and Deer with 1·25.

TABLE X.
HOUSING IN COUNTY DISTRICTS—1929.

	Deer.	Ellon.	Garioch.	Deeside.	Turriff.	Aberdeen.	Alford.	Huntly.	Total.
A.— <i>Completed during 1929.</i>									
1. With aid of Subsidy—									
(a) By Local Authority . . .	—	14	10	8	—	20	4	6	62
(b) By private enterprise . . .	17	3	6	5	3	33	3	2	72
2. By unassisted private enterprise	3	—	2	6	—	19	3	2	35
B.— <i>In course of erection at 31st December, 1929.</i>									
1. With aid of Subsidy—									
(a) By Local Authority . . .	10	—	—	—	—	—	—	—	10
(b) By private enterprise . . .	2	—	2	2	1	5	—	—	12
2. By unassisted private enterprise	1	—	1	1	—	7	1	—	11
Totals	33	17	21	22	4	84	11	10	202
Population	26,294	12,926	11,846	11,918	10,257	22,735	8,083	6,068	110,127
Number of new houses completed in 1929 or in course of erection, per 1,000 of population	1·25	1·3	1·8	1·8	·39	3·7	1·4	1·6	1·8
Number of applications lodged during 1929 under Housing (Rural Workers) Act, 1926	102	26	11	4	25	24	5	2	199

But almost as important as, if not more important than the erection of new houses is the conservation on economic lines of existing houses in rural areas, for this is one of the chief means whereby the tide of rural depopulation may be stemmed.

By the Housing (Rural Workers) Act, 1926, there is available a grant of two-thirds of the estimated cost of the works or a maximum sum of £100 in respect of each dwelling. This grant may be made either by way of a lump-sum payment or by the provision during a period not exceeding 20 years of any part of any periodical sums payable by way of loan charges for the purpose of carrying out the works. When, however, the grant is made to a landlord within the meaning of the Small Landowners (Scotland) Act, the grant should be made in a lump-sum. A stipulation which must be observed is that the house, after completion of the work, shall not exceed £400 in value.

This Act has been operative during the past three years and the numbers of applications lodged were as under :—

In 1927	.	.	.	.	.	50 applications for grant.
„ 1928	.	.	.	.	.	136 „ „
„ 1929	.	.	.	.	.	199 „ „

Reference to the foregoing table shows that 102 applications were lodged from the Deer District—more than those from all the other Districts in the County. In 1928 also, the greatest number of applications was made by those living in the Deer District.

Aberdeenshire has done better than most Counties in taking advantage of the provisions of this Act, but certain erroneous impressions as to its scope still exist. For example, the Act may be adopted by any Local Authority, and thus, in 1929, 4 applications were lodged with Inverurie Town Council and 1 with Huntly Town Council. Again, it is often stated that the reconstructed houses can be occupied only by agricultural workers, but provision is made for the reconstruction of houses or the conversion of buildings into dwellings for the accommodation of persons who, in the opinion of the Local Authority, would not ordinarily pay rent in excess of that paid by agricultural workers in the area.

It is to be hoped that the recently appointed District Councils will do all in their power to make the excellent provisions of this Act as widely known as possible.

The need for new houses in several villages in the County is clamant. Take the case of Aboyne. New houses are undoubtedly required in this area and the County Council will soon consider the housing needs of Aboyne and of other villages in the Deeside District, such as Torphins and Lumphanan.

With regard to the Deer District, the housing conditions in the Village of Old Deer leave much to be desired and a housing scheme will have to be prepared for this village which is by no means decadent. The same cannot be said for some other villages where the rentals vary, on an average, from £3 to £6 per annum and the inhabitants could not possibly meet the increase in rent and taxes attached to new houses.

In the Ellon District, the claims of Cruden Bay Village for new houses have been considered but I do not consider that new houses are meantime required here.

New Housing Schemes are being considered by most of the District Councils who now submit their proposals to the County Council. The erection of new houses in a village not infrequently involves considerable expenditure in providing adequate water-supply and up-to-date systems of sewage disposal. This is all to the good, from the view-point of environmental hygiene and health, but regard must always be had to the income of the tenants of these new houses. “Decanting” can often be satisfactorily carried out in towns, but it is a vastly more difficult problem in rural areas.

4.—DISINFECTIONS.

The number of official disinfections of premises performed by the several District Sanitary Inspectors is given hereunder :—

TABLE XI.

	Deer.	Ellon.	Garioch.	Deeside.	Turriff.	Aberdeen.	Alford.	Huntly.	Total.
After Scarlet Fever	43	44	45	7	21	66	55	16	297
„ Diphtheria	46	10	10	1	10	39	2	1	119
„ Enteric Fever	24	2	1	—	—	1	—	2	30
„ Tuberculosis	8	11	5	8	11	10	6	2	61
„ Other Infectious Diseases	3	7	4	11	8	5	4	2	44
Total	124	74	65	27	50	121	67	23	551

5.—FACTORY AND WORKSHOPS ACT.

In 1929, there were 861 factories and workshops on the register. Details as to the number of inspections, notices served, defects found and remedied, appear on Table XII.

TABLE XII.

	Deer.	Ellon.	Garioch.	Deeside.	Turriff.	Aberdeen.	Alford.	Huntly	Total.
Number on Register	164	87	103	139	85	144	77	62	861
„ of Inspections	86	88	83	122	133	103	94	34	743
Notices served under Section 2 (3), &c.	1	—	3	—	1	5	1	1	12
Defects found	1	9	3	1	2	5	4	1	26
„ remedied	1	9	3	1	2	5	4	1	26

Section II.

THE HEALTH OF THE BURGHS.

VITAL STATISTICS.

Population.—The population of the Burghs, as estimated by the Registrar-General to the middle of 1929, was 25,734. This number excludes the Burgh of Peterhead, which, until the end of 1929, had a separate Medical Officer of Health and administered its own Public Health, with the exception of the School Medical Services, the Tuberculosis Services and the Venereal Diseases Services which constituted Joint County Schemes.

As compared with the official estimate for mid-year 1928, there was an increase in all the Burghs, except Ballater and Rosehearty; the total estimated increase in 1929 was 544. Population data for each of the Burghs are given below:—

TABLE I.

Burghs.	1921 Census.	As estimated at middle of 1928.	As estimated at middle of 1929.	Increase or Decrease.
Ballater . . .	1,542	1,680	1,474	— 206
Ellon . . .	1,261	1,182	1,234	+ 52
Fraserburgh . .	10,514	10,102	10,114	+ 12
Huntly . . .	3,752	3,290	3,608	+ 318
Inverurie . . .	4,455	4,232	4,276	+ 44
Kintore . . .	741	662	725	+ 63
Oldmeldrum . .	1,015	913	1,006	+ 93
Rosehearty . . .	1,267	1,190	1,174	— 16
Turriff . . .	2,152	1,939	2,123	+ 184
Totals . . .	26,699	25,190	25,734	+ 544

Marriages.—There were 251 marriages, as against 225 in 1928. The marriage-rate per 1,000 of population was 9·8 as compared with 8·9 in 1928 and 1927.

Births.—A record of the total number of births, the corrected birth-rate, the number of illegitimate births, and the illegitimate birth-rate are given in Table II.

TABLE II.

Burghs.	Number (including Illegitimate Births).	Birth-rate (corrected).	Illegitimate Births.	Illegitimate Birth-rate per 100 Total Births.
Ballater . . .	19	12·9	1	5·3
Ellon . . .	15	12·2	1	13·3
Fraserburgh . .	201	19·9	18	9·5
Huntly . . .	85	23·6	16	20·0
Inverurie . . .	86	20·1	9	14·0
Kintore . . .	12	16·6	1	16·7
Oldmeldrum . .	22	21·9	6	27·3
Rosehearty . . .	15	12·8	2	13·3
Turriff . . .	38	17·9	5	15·8
Totals . . .	493	19·2	59	10·1
Corresponding figures for 1928 . . .	544	21·5	71	13·05

INCIDENCE OF THE COMMONER INFECTIOUS DISEASES.

In 1929, there were notified 43 cases of scarlet fever and 135 of diphtheria, the corresponding figures for 1928 being 75 and 31 respectively. There was therefore a diminution in the incidence of scarlet fever but a marked increase in that of diphtheria.

Seven cases of typhoid or para-typhoid fever were notified in 1929, 5 occurring in the Burgh of Rosehearty and 2 in Fraserburgh. All 7 cases received institutional treatment.

HOUSING.

In the appended Table are shown the housing activities in each Burgh during 1929. Reckoned as so many houses per thousand of population, Turriff heads the list with 17. Then follows Inverurie with 8·2, Huntly with 6·9 and Kintore with 5·5. In 1927 and 1928, the greatest number of houses built per thousand of population was in the Burgh of Kintore.

Four applications were made to Inverurie Town Council and one application to Huntly Town Council for assistance under the Housing (Rural Workers) Act, 1930.

A new Act—The Housing Act, 1930—has come into operation, and in view of its very generous terms, the Department of Health for Scotland are urging Local Authorities to meet their housing needs by taking full advantage of its provisions.

TABLE III.
HOUSING IN BURGHS—1929.

	Ballater.	Ellon.	Fraserburgh.	Huntly.	Inverurie.	Kintore.	Oldmeldrum.	Rosehearty.	Turriff.	Total
A.— <i>Completed during 1929.</i>										
1. With aid of Subsidy—										
(a) By Local Authority . . .	—	—	—	24	24	4	—	2	18	72
(b) By private enterprise . . .	2	—	3	—	10	—	—	—	—	15
2. By unassisted private enterprise . . .	—	—	—	—	1	—	—	—	—	1
B.— <i>In course of erection at 31st December, 1929.</i>										
1. With aid of Subsidy—										
(a) By Local Authority . . .	—	—	—	—	—	—	—	—	16	16
(b) By private enterprise . . .	2	—	—	—	—	—	—	—	—	2
2. By unassisted private enterprise . . .	—	1	—	1	—	—	—	—	2	4
Total	4	1	3	25	35	4	—	2	36	110
Population	1,474	1,234	10,114	3,608	4,276	725	1,006	1,174	2,123	25,734
Number of new houses completed in 1929 or in course of erection, per 1,000 of population.	2·7	·8	·3	6·9	8·2	5·5	—	1·7	17	4·3
Number of applications lodged during 1929 under Housing (Rural Workers) Act, 1926.	—	—	—	1	4	—	—	—	—	5

Section III.

MATERNITY AND CHILD WELFARE SERVICES.

The Scheme for Maternity Service and Child Welfare work embraces the eight Districts of the County and eight Burghs, the Burghs not coming within the scope of the scheme in 1929 being Peterhead and Fraserburgh. Under the Local Government (Scotland) Act, 1929, the major Health Services come under the administrative control of the County Council as from 16th May, 1930, and, in future, the Maternity and Child Welfare work in those two Burghs will form part of the general County Scheme.

In Aberdeenshire, as in most other rural areas, this scheme is in its infancy, but its development will be assured and its efficiency enhanced when the machinery for the co-ordination of the Medical Services is in working order. The scheme is essentially preventive in character and the ideal is to undertake more thoroughly the care of the pre-school child and to link up the Child Welfare Services with the School Medical Services and so diminish the large percentage of children who are found to have physical defects when they enter school.

The objects of our scheme may be summarised thus :—

1. The care of the mother before, during, and after confinement.
2. The preservation of the health of children until they reach school age.
3. Home visitation of mothers and infants by health visitors.
4. Measures for the prevention and effective treatment of abnormal conditions in mother and child.
5. Provision of adequate institutional accommodation for women during confinement, for mothers suffering from puerperal fever and pyrexia, and for children suffering from ophthalmia neonatorum, measles, whooping cough, diarrhoea, &c.
6. Provision of home-helps in exceptional cases.
7. Health education through the medium of Child Welfare Clinics.

Births and Birth-rates.

The number of births registered in the area covered by the scheme was 2,528, as compared with 2,629 in 1928—a decrease of 101 births. The population of the area was 125,747. The birth-rate was 20·1. Of the 2,528 births, 436 were illegitimate, giving an illegitimate birth-rate per 100 total births of 17·2. In 1928, the total birth-rate was 21·7 and the illegitimate birth-rate was 17·1.

Infantile Mortality.

The infantile mortality—the number of deaths amongst children under one year of age—was 183, as compared with 167 in 1928, an increase of 16.

The infantile mortality rate, or the number of deaths of children under one year per 1,000 registered births, was 72·3, as compared with 63·5 in 1928, 73·5 in 1927, and 75·5 in 1926. In 1929, the infantile mortality rate throughout Scotland was 87.

The causes of the 183 infant deaths appear in the accompanying table.

1929.
County of Aberdeen—Infantile Mortality.

Causes of Death.	DISTRICTS.								BURGHs.							Total.	
	Deer.	Ellon.	Garloch.	Deeside.	Turriff.	Aberdeen.	Alford.	Huntly.	Ballater.	Ellon.	Huntly.	Inverurie.	Kintore.	Oldmeldrum.	Roschearty.		Turriff.
Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough	2	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Heart Disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Epidemic Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tuberculous Meningitis	2	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	4
Tuberculosis of Intestines and Peritoneum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Tuberculous Disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bronchitis	2	1	1	1	1	—	2	1	—	—	—	—	—	—	—	—	9
Influenza	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2
Pneumonia	2	1	—	1	1	2	1	2	—	—	1	1	—	—	—	—	17
Other Diseases of Respiratory System	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa and Enteritis	6	2	—	—	—	5	—	—	—	—	—	—	—	—	—	—	13
Nephritis	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	1
Diseases of early Infancy and Malformations	22	16	15	9	6	12	7	4	—	—	5	2	1	—	1	1	101
Meningitis	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Violent Deaths	—	1	—	2	—	1	1	—	—	—	—	1	—	—	—	—	6
Other defined diseases	3	2	2	2	5	3	2	1	—	—	—	—	—	—	—	—	20
Causes ill-defined or unknown	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	46	29	21	16	14	23	13	8	—	—	6	4	1	—	1	1	183

Maternal Mortality.

Twenty-seven cases of puerperal fever were notified—24 from the Districts and 3 from the Burghs. The number notified in 1928 was 20; in 1927, 15; and in 1926, 12. Twenty-one of the 27 cases notified in 1929 were treated institutionally in the puerperal wards of the Aberdeen City Hospital; of these, 5 died. One case was treated in a County Hospital; this case terminated fatally. The total number of deaths was therefore 6; in one of these, the immediate cause of death was certified as scarlet fever.

Thirteen cases of puerperal pyrexia were notified, and 9 of these were treated in institutions.

In all, 9 puerperal cases were treated at home; none died.

Puerperal fever is compulsorily notifiable under the Infectious Diseases (Notification) Act, 1889, and puerperal pyrexia is now also notifiable. Puerperal pyrexia has been defined as "any febrile condition occurring within twenty-one days after child-birth or miscarriage in which a temperature of 100·4° F. or more has been sustained during a period of twenty-four hours, or has recurred during that period."

Cases of puerperal fever or pyrexia are accommodated in special wards at the City Hospital, and the facilities here provided have been appreciated by the general practitioners in the area.

Midwives (Scotland) Act, 1915.

Two women who were registered as midwives gave notice to the Supervising Authority of their intention to practice. No payments were made by the Supervising Authority for medical assistance to midwives.

No complaints of malpraxis or neglect were lodged against any of the midwives. No case of puerperal fever or of ophthalmia neonatorum was reported to have occurred in their practice.

Provision of Foods.

There were only two applications for food and milk for children. The total sum expended under this heading was £27 8s. 6½d., as compared with £39 8s. 8d. in 1928.

Measles and Whooping Cough.

No definite arrangements were made for the institutional treatment of children suffering from these diseases. If the necessity arose, accommodation could be found in one of the Infectious Diseases Hospitals.

Ophthalmia Neonatorum.

Twelve cases were notified in 1929. The average number of cases notified during the preceding quinquennium was 14.

All the 12 cases were notified by general practitioners, 11 from the Districts, and 1 from the Burghs. Of the 12 cases, 3 were treated at the Aberdeen City Hospital and the remainder at home. In none of the cases was the vision impaired.

Epidemic Diarrhœa.

Amongst children under one year of age there were 13 deaths from diarrhœa and enteritis. The diarrhœa did not make its appearance in epidemic form.

Provision for Sick Children.

Ailing children, under five years of age, may be admitted to the Aberdeen Royal Hospital for Sick Children or to the institutions belonging to the Aberdeen Town Council. Accommodation for a very limited number of children, from three to five years of age, is also available at Linn Moor Convalescent Home, Culter.

Home-helps.

In 1929, one home-help was supplied by the Public Health Committee.

Maternity Hospital and Ante-Natal Annexe.

Some years ago, an agreement was come to with the Managers of the Maternity Hospital whereby the County Council make a payment to the Managers of 30s. per week per patient.

In 1929, 96 County patients were treated in the Maternity Hospital—61 in the Maternity Hospital and 35 in the Ante-natal Annexe. The sum paid amounted to £128 18s. 7d.

Educational Measures.

Four Child Welfare Clinics have been established—at Huntly, Inverurie, Bucksburn, and Ellon. These clinics were largely attended. Lectures were given by the doctors of the areas, by official medical officers, by the District Nurses, and by willing helpers amongst the several Committees.

The success of these clinics depends entirely on harmonious co-operation between the family doctors, the voluntary workers, the District Nurses, and the Public Health officials. Special praise is due to the voluntary workers who give their services most ungrudgingly in this noble preventive effort.

Section IV.

SCHOOL MEDICAL SERVICES.

Number of Schools and Pupils.

The number of schools in the area is 239. The number of children on the register as at 31st July, 1929, was 25,391. The percentage of attendance was 90·7 per cent. as compared with 90·8 per cent. in the previous session.

Number of Visits to Schools.

The number of visits by the medical officers to schools for routine or systematic examination was 483. The number of special visits, that is, visits other than for purposes of systematic examination, was 507. The corresponding figures for 1927-28 were 434 and 661 special examinations.

THE PHYSICAL CONDITION OF THE SCHOOL CHILDREN.

A. Total Number of Children Examined—

(a) Systematic Examination—

Beginners	2,941
Nine-year-olds	2,908
Twelve-year-olds	2,201
Sixteen-year-olds	145
	8,195

<i>(b) Special cases examined at special visits and re-examinations</i>	7,929
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Total	16,124
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B. Number of children notified to parents as suffering from defects 2,167

<i>Number placed under observation for re-examination at subsequent visits, without treatment being recommended .</i>	1,364
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C. Number of Children Receiving Attention—

Out of 2,294 defects in children requiring treatment, 1,912, or 83·3 per cent., received attention during the year. This includes 75 specially recommended by the medical officers for dental treatment; of these, only 30, *i.e.* 40 per cent., were treated.

In the following statements, 8,195 is the number of pupils who underwent the full systematic examination, the only exception being the statement relating to visual acuity. The eyesight of entrants is not usually tested, and the total number of cases examined was 5,254, as compared with 4,992 in the previous session :—

D. Clothing—

Clothing was found to be insufficient, dirty, or in bad repair in only 50, or ·6 per cent. Three special cases were found to be unsatisfactory in this respect.

E. Footgear—

Footgear was found to be unsatisfactory in 18, or ·2 per cent, and in 2 special cases.

F. Average Heights and Weights of Children—

TABLE I.

BOYS.						
No. of Children.		Average Age in years.		Average Height in inches.		Average Weight in lbs.
83	.....	$4\frac{8}{12}$	.....	39·6	.....	38·5
715	.....	$5\frac{4}{12}$	.....	42·5	.....	42·6
676	.....	$6\frac{3}{12}$	.....	44·7	.....	45·5
89	.....	$7\frac{4}{12}$	.....	45·1	.....	47·4
794	.....	$8\frac{6}{12}$	.....	47·7	.....	51·9
636	.....	$9\frac{3}{12}$	.....	49·8	.....	56·1
519	... ..	$11\frac{5}{12}$	.....	51·2	... ..	68·2
585	. . . .	$12\frac{4}{12}$	... ..	55·5	.....	72·5
35	.....	$15\frac{8}{12}$	... ..	64·7	.....	122·7
21	. . . .	$16\frac{4}{12}$	... ..	65·5	.....	124·9

GIRLS.						
No. of Children		Average Age in years.		Average Height in inches.		Average Weight in lbs.
96	.....	$4\frac{3}{12}$	.....	39·5	.....	38·7
886	.....	$5\frac{5}{12}$	.. . .	42·7	.....	42·5
485	. . . .	$6\frac{4}{12}$	.....	44·6	.....	43·8
75	.....	$7\frac{3}{12}$	.....	45·7	.....	47·2
683	...	$8\frac{6}{12}$	.....	47·3	.....	50·7
631	.....	$9\frac{1}{12}$	.....	51·1	.....	57·5
602	.....	$11\frac{6}{12}$	.....	53·8	.....	69·8
495	.....	$12\frac{5}{12}$	.....	55·9	.. . .	75·4
45	.....	$15\frac{7}{12}$	.....	62·7	.....	108·8
44	.....	$16\frac{8}{12}$	.....	63·2	.... .	117·3

*G. Cleanliness of Head and Body—**(a) Head—*

Dirty or Nits	. . . . .	569 or 6·9 per cent.
Vermineous	. . . . .	71 or ·8 „
Special cases	. . . . .	110

(b) Body—

Dirty	. . . . .	57 or ·6 „
Vermineous	. . . . .	47 or ·5 „
Special cases	. . . . .	40

*H. Condition of Skin—**(a) Head—*

Ringworm	. . . . .	2 or ·02 per cent.
Impetigo	. . . . .	49 or ·5 „
Favus	. . . . .	— —
Other diseases	. . . . .	2 or ·02 „
Special cases	. . . . .	20

(b) Body—

Ringworm	. . . . .	— —
Impetigo	. . . . .	— —
Scabies	. . . . .	9 or ·1 „
Other diseases	. . . . .	— —
Special cases	. . . . .	4

I. Nutrition—

Above average	. . . . .	877 or 10·7 „
Average	. . . . .	7,025 or 85·7 „
Below average	. . . . .	293 or 3·5 „
Very bad	. . . . .	— —
Special cases	. . . . .	4

J. Teeth—

Sound	1,037 or 12·6	per cent.
1-4 Decayed	6,188 or 75·5	„
5 or more Decayed	929 or 11·3	„
Oral sepsis	41 or ·5	„
Special cases	71	

K. (a) Nose—

Catarrh	283 or 3·4	„
Obstruction	3 or ·03	„
Other diseases	1 or ·01	„
Special cases	3	

(b) Throat—

Tonsils—

Slightly enlarged	942 or 11·4	„
Markedly enlarged	252 or 3	„

Adenoids—

Probably present	220 or 2·6	„
Present	8 or ·08	„
Other diseases	106 or 1·3	„
Special cases	142	

(c) Lymphatic Glands—

1. Submaxillary—

Palpably enlarged	1,299 or 15·8	„
Markedly enlarged	11 or ·1	„
Suppurating	—	—
Cicatrices	34 or ·4	„

2. Cervical—

Palpably enlarged	755 or 9·2	„
Markedly enlarged	6 or ·06	„
Suppurating	1 or ·01	„
Cicatrices	38 or ·4	„

L. External Eye Diseases—

Blepharitis	122 or 1·5	„
Conjunctivitis	23 or ·2	„
Corneal opacities	4 or ·04	„
Squint	133 or 1·6	„
Other diseases	39 or ·4	„
Special cases	24	

M. Visual Acuity (number examined 5,254)—

Good vision	4,461 or 84·9	„
Fair vision	541 or 10·2	„
Bad vision	252 or 4·8	„
Special cases	69	

(The vision of entrants is not tested.)

N. Ears—

Otorrhœa	32 or ·3	„
Wax	15 or ·2	„
Other diseases	7 or ·07	„

O. Hearing—

Slightly deaf	21 or ·2	„
Markedly deaf	—	—
Special cases	4	

P. Speech—

Defective articulation . . .	42 or	·5	per cent.
Stammering . . .	8 or	·08	„
Special cases . . .	9		

Q. Mental Condition—

Backward . . .	105 or	1·2	„
Mentally defective . . .	4 or	0·4	„
Special cases . . .	29		

R. Heart and Circulation—

Acquired organic disease . . .	54 or	·7	„
Congenital organic disease . . .	8 or	·08	„
Functional disease . . .	106 or	1·3	„
Anæmia . . .	102 or	1·2	„
Special cases . . .	19		

S. Lungs—

Chronic bronchitis . . .	48 or	·6	„
Tuberculosis . . .	—	—	
Suspected tuberculosis . . .	4 or	·04	„
Other diseases . . .	42 or	·5	„
Special cases . . .	6		

T. Nervous System—

Epilepsy . . .	2 or	·02	„
Chorea . . .	2 or	·02	„
Paralysis . . .	12 or	·1	„
Other diseases . . .	6 or	·06	„

U. Tuberculosis (Non-pulmonary)—

Glandular . . .	27 or	·3	„
Bones and joints . . .	8 or	·08	„
Abdominal . . .	2 or	·02	„
Skin . . .	2 or	·02	„
Other forms . . .	5 or	·05	„
Special cases . . .	3		

V. Rickets—

Slight rickets . . .	65 or	·8	„
Marked rickets . . .	2 or	·02	„
Special cases . . .	—		

W. Deformities—

Congenital . . .	56 or	·6	„
Acquired . . .	21 or	·2	„
Special cases . . .	1		

X. Infectious and Contagious Diseases

Special cases . . .	75 or	·9	„
	30		

Y. Other Diseases and Defects

Special cases . . .	202 or	2·4	„
	47		

Dental Inspection and Treatment.

<i>Inspections—</i>	Whole-time Dentists.	Part-time Dentists.
Number of schools visited	95	10
Number of scholars inspected	8,075	1,973
Number of children with sound teeth	1,662	376
Percentage with sound teeth	20·5%	19·1%
Number of children recommended for treatment	6,413	1,597
Number of consents	3,791	975
Percentage of consents	59·1%	61%
<i>Treatment—</i>		
Number of schools visited	103	11
Number of children recommended and treated .	3,690	—
Total number treated, including “specials” .	3,955	794
Percentage treated of those requiring treatment	59·2	49·7%
Number of extractions—		
(Temporary)	5,552	1,332
(Permanent)	1,078	180
Number of fillings—		
(Temporary)	461	160
(Permanent)	1,440	618
Amount of fees received	£90	10 6

Defective Vision.

Centres visited and number of cases tested :—

Centres.	Number of Cases.
Aberdeen	70
Huntly	76
Peterhead	177
Ellon	40
Inverurie	54
Oldmeldrum	21
Maud	37
Strichen	24
Fraserburgh	150
Kemnay	30
Turriff	69
Alford	35
Insch	21
Bucksburn	17
Total	<u>821</u>

Analysis of these 821 cases :—

Spectacles ordered	655
Spectacles satisfactory or unnecessary	153
Corneal nebulae	5
Conjunctivitis	2
Strumous ophthalmia	1
Corneal ulcer	1
Adherent leucoma	1
Optic Atrophy	1
Sequele of ophthalmia neonatorum	1
Mental deficiency	1
Total	<u>821</u>

In those children for whom spectacles were prescribed the various refractive errors occurred in the following proportions :—

Hypermetropia	320 = 48·85 per cent.
Hypermetropic astigmatism	118 = 18·01 „
Myopia	80 = 12·21 „
Myopic astigmatism	82 = 12·52 „
Mixed astigmatism	55 = 8·39 „
	<hr/>
	655
	<hr/>

Convergent strabismus occurred in 10 per cent. of the cases of hypermetropia, and in 2·54 per cent. of the cases of hypermetropic astigmatism.

Among the refraction cases the following conditions were noted :—2 cases of congenital nystagmus, 1 of congenital dislocation of the lenses, and 1 of ophthalmia neonatorum sequelæ.

Several children with high myopic defects were seen :—1 with -13 dioptries at 6 years of age, and another with the same amount at 8 years; also 1 with -10D at 8 years, and another with -9D at 12 years of age.

In these instances special instructions with regard to lessons were issued to the parents and teachers.

Section V.

TUBERCULOSIS SERVICES.

STATISTICS.

Incidence of the Disease.

The County Tuberculosis Scheme includes the eight Districts and the ten Burghs.

The total number of notifications received was 254, as against 302 in 1928. In addition to the 254 primary notifications, there were 11 "transfers," that is, patients who, having been found to be suffering from tuberculosis in other areas and having been notified to the Medical Officers of Health of those areas, were again notified to the Medical Officer of Health for the County on coming to reside in Aberdeenshire. There were also 10 re-notifications of cases who had been previously notified or notified by more than one practitioner.

Of the 254 notified cases, 142 suffered from pulmonary tuberculosis and 112 from non-pulmonary tuberculosis. The distribution of these cases in age and sex groups appears in Table I.

TABLE I.
Number of Cases notified as suffering from Tuberculosis in 1929.

	Under 5.	5 and under 10.	10 and under 15.	15 and under 25.	25 and under 35.	35 and under 45.	45 and under 65.	65 and upwards.	Total.
Pulmonary	2	4	4	13	15	6	8	3	55
	1	5	7	26	19	12	17	—	87
Non-Pulmonary	10	15	1	15	4	1	4	—	50
	8	15	10	14	9	5	1	—	62
Total	21	39	22	68	47	24	30	3	254

During the last six years there has been a decided fall in the number of pulmonary cases notified, and, with the exception of 1929, a marked increase in the number of non-pulmonary cases. This increase of non-pulmonary notifications does not indicate an increased incidence of this type of the disease, but rather that notification is now more complete. It is a well-known fact that completeness of notification of any notifiable disease varies directly with the adequacy of the institutional accommodation provided by Local Authorities.

Sources of Notifications.

The sources of the notified cases were as follows:—

1. Notified by General Practitioners	249
2. „ Medical Officers of Medical and Surgical Hospitals	3
3. „ Medical Officers of Mental Institutions	1
4. „ County Medical Officer of Health	1
5. „ Medical Officers of Health of other areas (“Transfers”)	11
6. “Re-notifications”	10
Total	<hr/> 275 <hr/>

Localisation of Disease.

The parts of the body affected in the 112 non-pulmonary cases were:—

1. Glands	57
2. Bones and joints	18
3. Brain membranes	7
4. Abdomen	14
5. Other sites (including lupus)	16
Total	<hr/> 112 <hr/>

Occupational Incidence.

No predisposing occupational factors are demonstrable in Aberdeenshire.

Of the 254 primary notifications, 109 were males; of these 14 were farm workers, 24 were schoolboys and 9 were general labourers. For the past three years, there has been an appreciable decrease in the number of schoolboys notified. No case of silicosis came under observation during the year.

With regard to the female notifications, there were 145, of whom 48 were housewives, 40 were schoolgirls and 22 were domestic servants. This year there was a decrease in the number of housewives notified.

Mortality.

The number of cases who were notified in 1929 and who died before the end of the year was 25. The percentage of deaths to notifications within the year was 9·8, as compared with 10·9 in 1928, 11 in 1927, 13·5 in 1926 and 14·8 in 1925.

All forms of tuberculosis accounted for 113 deaths, and of these, 80 were pulmonary and 33 non-pulmonary deaths. The total number of deaths in 1928 was 139, in 1927—132, in 1926—107, and in 1925—144.

The total number of deaths from tuberculosis in the County, namely, 113, represents a death-rate of 92·3 per 100,000. The 80 deaths attributable to pulmonary tuberculosis represents a death-rate of 65·3 per 100,000.

Throughout Scotland, in 1929, deaths from all forms of tuberculosis numbered 4,579, equivalent to a death-rate of 94 per 100,000. Of the 4,579 deaths, 3,287 were ascribed to tuberculosis of the lungs, and this number equals a death-rate of 67 per 100,000.

The following table shows the total number of deaths in the whole County from all causes, the deaths from pulmonary and non-pulmonary tuberculosis and the deaths from all respiratory diseases, excluding phthisis.

TABLE II.

	Total Number of Deaths.	Deaths from			Percentage of Deaths from Tuberculosis to Total Deaths.	Percentage of Deaths from all Respiratory Diseases (except Phthisis) to Total Deaths
		Tuberculosis.		All Respiratory Diseases (except Phthisis).		
		Pulmonary.	Non- Pulmonary.			
COUNTY DISTRICTS—						
Deer	356	13	8	43	5·9	12
Ellon	176	5	1	17	3·4	9·6
Garioch	156	9	1	12	6·4	7·7
Deeside	131	5	3	9	6·1	6·8
Turriff	136	2	—	15	1·5	11·1
Aberdeen	318	14	7	33	6·6	10·3
Alford	100	5	2	17	7	17
Huntly	87	1	2	12	3·5	13·9
BURGHAL DISTRICTS—						
Ballater	18	—	—	3	—	16·6
Ellon	22	2	—	7	9·1	31·8
Fraserburgh	136	8	3	22	8·1	16·1
Huntly	48	1	1	5	4·2	10·4
Inverurie	66	3	1	8	6	12·1
Kintore	13	1	1	2	15·3	15·4
Oldmeldrum	15	—	—	3	—	20
Peterhead	195	11	2	22	6·6	11·3
Rosehearty	13	—	—	2	—	15·4
Turriff	43	—	1	8	2·3	18·6
Total	2,029	80	33	240	5·6	11·8
Corresponding figures for 1928	1,942	102	37	225	7·2	11·6

Table III gives the ages at death, in five age-groups, amongst pulmonary deaths during the past five years.

TABLE III.

Age Groups.	1929.		1928.		1927.		1926.		1925.
Under 15 years. . .	5	...	3	...	5	...	6	...	36
15 years—25 years .	13	...	31	...	20	...	18	...	28
25 „ —45 „ . . .	37	...	44	...	47	...	34	...	31
45 „ —65 „ . . .	20	...	21	...	25	...	19	...	17
Over 65 years . . .	5	...	3	...	5	...	3	...	—
Total	80	..	102	...	102	...	80	...	112

TREATMENT.

1. Institutional Treatment.

The following are the institutions to which the County Council send tuberculous patients:—

1. Noranside Sanatorium.
2. Newhills Sanatorium.
3. Woodend Hospital, Aberdeen.
4. Aberdeen City Hospital.
5. Thomas Walker Hospital, Fraserburgh.
6. Burgh Hospital, Peterhead.
7. Inch and District War Memorial Hospital, Inch.
8. Linn Moor Convalescent Home, Culter.

The distribution of the 254 notified primary cases is shown in the following table :—

TABLE IV.

	Pulmonary.			Non-pulmonary.	
A. Admitted to approved institutions .	71	—	...	44	—
B. Not admitted to approved institutions because—					
(1) Refused to go to institutions .	—	3	...	—	1
(2) Died before commencement of institutional treatment .	—	9	...	—	—
(3) Inmates of asylum, &c. . . .	—	2	...	—	—
(4) Inmates of voluntary hospitals	—	—	...	—	2
(5) Visitors or left area	—	—	...	—	—
(6) Unsuitable for institutional treatment or such treatment not required	—	46	...	—	56
(7) Awaiting institutional treatment at end of year	—	11	...	—	9
	71	71	...	44	68
Total	142	...		112	

From the foregoing table, it will be seen that 115 of the notified primary cases received institutional treatment, but the actual number of *new* cases treated in 1929 includes—

- (1) Those who may have been notified in previous years but who, for the first time, received institutional treatment in 1929.
- (2) Cases sent to Tuberculosis Institutions for diagnostic purposes.
- (3) Cases sent to Linn Moor Convalescent Home, Culter. Practically none of these children have been notified. They are pre-tuberculous; they have the stigmata of tuberculosis, but to ask practitioners to notify these cases would lead to fictitious inflation of the numbers notified.

In Table V there appears the distribution in sanatoria and hospitals of those primarily notified in 1929, of those who were notified prior to 1929 but who received treatment for the first time in that year, and of observation and pre-tuberculous cases.

TABLE V.

Institutions.	Insured.		Uninsured.		Total.
	Male.	Female.	Male.	Female.	
Sanatoria	13	4	3	11	31
Hospitals	24	20	22	37	103
Linn Moor Convalescent Home .	—	—	22	23	45
Total	37	24	47	71	179

Duration of Treatment.

A short stay in an institution is of little avail if arrest or cure of the disease is aimed at, but large sums of money are being expended annually on the institutional treatment of the tuberculous and it is somewhat doubtful whether the results obtained justify such expenditure. Some hold that equal advantage, with less financial outlay, could be derived from a short institutional stay for educational purposes. This brings us to the necessity for the establishment of an "After-Care Committee." The need for such a Committee has been frequently pointed out, and, with the re-organisation of the medical and hospital services, this ideal may yet be attained.

If account be taken only of those patients who completed treatment before the end of 1929, we find that the average duration of stay in institutions was 224 days. Since 1914, the shortest average duration of stay in institutions was in 1917, with 131 days, and the longest in 1922 and 1925, with 225 days each.

Non-pulmonary or "Surgical" Tuberculosis.

The institutions in which these cases are accommodated are Woodend Hospital, Inch War Memorial Hospital and the Thomas Walker Hospital, Fraserburgh.

Conservative treatment is, wherever possible, adopted in the treatment of non-pulmonary tuberculosis and the most up-to-date institution for these cases is Woodend Hospital, where there is an X-ray plant and where the advice of surgeons attached to the General Hospital is available. Here, also, artificial sunlight treatment can be given. A full statement on the nature, action and method of administration of ultra-violet rays appeared in the Annual Report for 1925. This form of therapy has not been adopted in cases suffering from lung tuberculosis.

Dental Treatment.

The whole-time school dental surgeons periodically visit Tuberculosis Institutions and give dental treatment to in-patients. Their work during the year is summarised in Table VI.

TABLE VI.

Name of Institution.	Number of Patients who received Treatment by—			
	Extraction.	Filling.	Scaling.	Total.
Newhills Sanatorium	6	4	4	14
Noranside Sanatorium	4	—	3	7
Linn Moor Convalescent Home . .	26	6	—	32
Thomas Walker Hospital, Fraserburgh	7	5	6	18
Peterhead Burgh Hospital	4	—	1	5
Total	47	15	14	76

2. Domiciliary Treatment.

Domiciliary treatment includes supervision by the family doctor, by the Tuberculosis Medical Officer and by the District Nurse. It is usually only effective if preceded by a course of treatment in an institution.

In Aberdeenshire, there are 60 open-air shelters, and these are lent free to tuberculous patients, preference being given to post-institutional cases, who alone

use them to the best advantage. In 1929, 72 patients had the use of shelters—32 males and 40 females.

Additional nourishment, consisting of milk, eggs, butter and meat, was supplied to 64 patients at a cost of £370 3s.

Special drugs are also supplied and the total cost of these amounted to £229 3s. 4d.

3. Dispensary Treatment.

There are 6 Dispensaries connected with the County Public Health Department. The Central Dispensary is situated at the Public Health Offices, 4, Albyn Place, Aberdeen, and there are five Branch Dispensaries—at Huntly, Inverurie, Peterhead, Fraserburgh and Bucksburn. At the Central Dispensary, patients are examined every Friday, and at the Branch Dispensaries clinics are held fortnightly. With the exception of St. John's Clinic, Bucksburn, the clinics are held during the day. At St. John's Clinic, there is a fortnightly evening session for the convenience of patients who are out working during the day.

Table VII gives the numbers who attended the individual clinics and also the number of visits.

TABLE VII.

Dispensary.	Number of Patients.	Total Number of Visits.
1. Central	119	174
2. Huntly	38	127
3. Inverurie	28	95
4. Peterhead	63	128
5. Fraserburgh	35	134
6. Bucksburn	54	74
Total	337	732

In 1929, 114 radiograms of the chest and 135 of other parts of the body were taken at Woodend and City Hospitals. Particulars are given in the following table :—

TABLE VIII.

Site of Disease.	Number of—		Total.
	Indoor Patients.	Outdoor Patients.	
Pulmonary	90	54	144
Non-pulmonary	125	10	135
Total	215	64	279

Section VI.

NURSING SERVICES.

There are now 38 District Nursing Associations affiliated with the County Nursing Association. Each Association employs one nurse, with the exception of Stoneywood District Nursing Association, which employs two nurses. The functions of the County Nursing Association are largely advisory.

Of the 39 District Nurses, 34 are Jubilee Nurses, while 5 are non-Jubilee Nurses. The Associations employing Jubilee Nurses are further affiliated with the Queen's Institute of District Nursing, Edinburgh. All the Jubilee Nurses are fully trained nurses, and have had maternity experience, but, as they act as Health Visitors, it would be highly desirable if they received a regular course of training in health visiting work before undertaking district work. So far, the employment of the District Nurses as part-time Health Visitors has worked very satisfactorily. Any other principle in a rural area like Aberdeenshire would be expensive and difficult to administer.

Official Duties of Nurses.—Nurses employed by the several District Nursing Associations undertake duty under the three following statutory schemes, viz. :—Maternity Service and Child Welfare Scheme, the Tuberculosis Scheme, and the Scheme for the Medical Inspection and Treatment of School Children. Their chief statutory duties are connected with work under the Maternity Service and Child Welfare Scheme; they attend women at confinement, pay regular visits during the puerperium, and, generally speaking, supervise ailing children until they reach the age of 5 years. They are also present at the Child Welfare Centres when clinics are being held. It has not been our practice to encourage District Nurses to act as midwives independently of doctors, and in the County, only one District Nurse is registered as a midwife, the reason being that the area covered by this nurse is sparsely populated and has no resident doctor.

The District Nurses also perform important work in connection with school children. They are present at the schools when medical inspection is taking place; they “follow up” defective children in their homes and impress on the parents the necessity of calling in the family doctors and of having necessary treatment carried out. They visit schools at frequent intervals and make surprise inspections on children suspected to be verminous. They are also present when the school oculist and school dentists visit schools or centres.

With regard to the Tuberculosis Scheme, the work performed by the nurses has been much appreciated by the patients. Their duties in this connection include the visitation of domiciliary cases and the accompanying of cases to and from institutions.

Record of Work Performed by the District Nurses.—The proportion of time spent in the three statutory services and in other nursing work to the total hours on duty—with relative percentages—appear below, and corresponding figures are given for year 1928.

YEAR.	HOURS SPENT ON				TOTAL.
	School Work.	Maternity Work.	Tuberculosis Work.	All other Duty.	
1929 . . . }	3,478 $\frac{3}{4}$ or 4.7 %.	19,954 or 26.1 %.	2,269 or 2.9 %.	50,771 $\frac{1}{4}$ or 66.3 %.	76,473
1928 . . . }	4,607 $\frac{3}{4}$ or 6.1 %.	22,986 $\frac{1}{4}$ or 30.5 %.	2,403 $\frac{3}{4}$ or 3.2 %.	45,308 $\frac{1}{2}$ or 60.1 %.	75,306 $\frac{1}{4}$

Financial Arrangements.—In respect of the statutory services, each District Nursing Association receives £40 under the Maternity Service and Child Welfare Scheme, £20 under the Tuberculosis Scheme, and £20 under the Scheme for the Medical Inspection and Treatment of School Children. The Department of Health for Scotland have indicated that the County Council might consider the advisability of giving grants according to the existing financial condition of the Association, rather than these stereotyped sums. It has, however, been considered inopportune to change the existing practice.

Under a separate arrangement, a sum of £40 is paid annually to Peterhead Town Council for the services of their Health Visitor in connection with school work, and a further sum of £20 is given to the Peterhead Hector Sick Nursing Institute in consideration of their nurse's work in connection with the supervision of tuberculous patients undergoing home treatment.

Repeated suggestions have been made that the County Council should follow the lead of several other Counties and appoint a Lady Superintendent to co-ordinate the work of the several District Nurses. The County Council have not deemed it advisable to proceed with such an appointment, chiefly on the score of expense, but no doubt such an official would assist in the inauguration of new District Nursing Associations, for it is estimated that other 10 District Nurses will be required before the County is covered with a complete network of nurses.

Several of the District Nurses have motor cars and motor cycles, but even with these means of transport it has not been found practicable to enlarge the areas covered by the District Nurses.

Section VII.

THE TREATMENT OF VENEREAL DISEASES.

During 1929, the arrangements for the treatment of venereal diseases were similar to those described in previous Annual Reports. Under the Public Health (Venereal Diseases) Regulations (Scotland), 1916, Local Authorities were empowered to frame schemes for the prevention, diagnosis and treatment of venereal diseases. A combined scheme, including the City of Aberdeen and the North-Eastern Counties, became operative in May, 1919, and, in 1922, the Counties of Zetland and Orkney became contributors in this Joint Scheme. Although the scheme is definitely framed to include prevention, the only side likely to prove effective is that relating to treatment, and patients ought, in the public interest, continue treatment until free from infection, and, in their interest, until cure is effected. There is at present no adequate control of venereal diseases, although endeavours were made in 1924 by several Local Authorities to have venereal diseases made compulsorily notifiable in virtue of powers conferred by Section 78 of the Public Health Act.

The principal treatment centre of the Joint Scheme functions at the Aberdeen Royal Infirmary.

Number of New Cases.—The number of new cases attending for treatment since 1925 was as follows:—

1925	.	.	.	.	.	.	.	94 new cases.
1926	.	.	.	.	.	.	.	96 „
1927	.	.	.	.	.	.	.	98 „
1928	.	.	.	.	.	.	.	108 „
1929	.	.	.	.	.	.	.	131 „

Of the 131 new cases treated in 1929, 40 suffered from syphilis, 61 from gonorrhœa, 1 from soft chancre, 1 mixed infection and 28 from conditions other than venereal. Eighty-three were males and 48 females. The County figures show that almost twice as many men apply for treatment at the clinics. In 1928, the total number of new cases treated was 108, of whom 33 suffered from syphilis and 58 from gonorrhœa.

Number of New Cases Treated in Institution.—Twenty-five cases were admitted to the special wards of the Aberdeen Royal Infirmary. Of these, 14 were men and 11 women. Twelve suffered from syphilis, 11 from gonorrhœa, 1 mixed infection, and 1 from a condition other than venereal. The relative number of new cases treated institutionally during the past five years was:—

1925	.	.	.	.	.	.	.	16 cases.
1926	.	.	.	.	.	.	.	15 „
1927	.	.	.	.	.	.	.	20 „
1928	.	.	.	.	.	.	.	31 „
1929	.	.	.	.	.	.	.	25 „

Number of Attendances of Outdoor Cases at Treatment Centre.—In the year under review, the total number of attendances at the Treatment Centre was 3,227, as compared with 3,061 in 1928, 3,301 in 1927, and 2,231 in 1926.

Supply of Special Drugs for Syphilis.—In 1929, 48 doses of anti-syphilitic drugs were supplied to three institutions and 161 doses to twenty-four practitioners. The figures relating to the past five years are shown hereafter:—

YEAR.	INSTITUTIONS.		PRIVATE PRACTITIONERS.	
	Number of Institutions.	Number of Doses.	Number of Practitioners.	Number of Doses.
1925	—	—	10	46
1926	—	—	36	288
1927	—	—	13	92
1928	3	62	21	120
1929	3	48	24	161

Laboratory Examinations.—The total number of County laboratory examinations performed since 1925 in connection with the Venereal Diseases Scheme was as follows :—

1925	850 examinations.
1926	1,014 „
1927	1,130 „
1928	1,207 „
1929	1,161 „

In 1929, the Wassermann Reaction was performed in 771 cases, of whom 301 were positive. The exudate was examined in 6 cases, and of these, 3 were positive. Examination for the gonococcus was made in 384 instances, and in 65 positive results were obtained.

Of the 1,161 specimens examined, 67 were sent by private practitioners.

“Incomplete Cases.”—Every year a proportion of cases fails to complete treatment, and, unfortunately, owing to lack of legislative control, patients may avail themselves of treatment but may discontinue it at will, irrespective of the degree of infectiousness or of the occupation. Many patients think that the disease is cured whenever the evident physical symptoms disappear, but in this they are absolutely wrong, for cases imperfectly treated may ultimately develop such diseases as locomotor ataxia or general paralysis of the insane. The great defect in all Venereal Diseases Schemes is that there is no power to enforce continuity of treatment until the patients are free from infection or are cured.

In 1929, only 13 patients failed to complete treatment—7 males and 1 female suffering from syphilis and 5 males suffering from gonorrhœa. The numbers who failed to complete treatment in the previous four years were :—1928—7; 1927—14; 1926—20; 1925—24.

Section VIII.

BACTERIOLOGICAL SERVICES.

Report on Bacteriological Work performed in the County Bacteriological Laboratory during the year ending 31st December, 1929, by Dr. J. F. Tocher, Director of the County Bacteriological Laboratory.

I beg to report on the work performed in the County Bacteriological Laboratory, Crown Mansions, 41½, Union Street, Aberdeen, for the year ending 31st December, 1929.

During the year 4,295 specimens were received for examination, of which 3,775 were from Public Health sources while 520 specimens were received under the Tuberculosis Scheme for the County.

Examinations for B. Diphtheriæ.

3,026 swabs were received for examination for *B. diphtheriæ*. General practitioners sent 656 swabs, of which 144 swabs were positive. The County Medical Staff had 350 swabs examined, of which 9 swabs gave positive results. From the hospitals in the County 2,020 swabs were examined, of which 259 were positive.

Table I. shows the source of the swabs and the results obtained.

	+	Throat.	Nose.	Ear.	—	Total.
General Practitioners, . . .	144	130	13	1	512	656
County Medical Officers, . . .	9	8	1	—	341	350
County Hospitals,	259	173	85	1	1,761	2,020
	412	311	99	2	2,614	3,026

Examinations for B. Typhosus and Allied Organisms.

362 specimens were examined for organisms of the "enterica" group and for agglutinating properties towards this group of organisms.

Fæces.—169 samples of fæces were examined for *B. typhosus* and allied organisms, 75 specimens being received from general practitioners, while 94 specimens were received from hospitals. From the 75 samples from general practitioners, 4 gave positive results, of which 2 were positive for *B. paratyphosus* B., while the causal organisms in the other samples were Morgan's No. 1 bacillus and *B. dysenteriæ* Sonne respectively. 18 positive results were obtained from the hospital specimens, 4 being positive for *B. typhosus* and 14 positive for *B. paratyphosus* B.

Urines.—34 urines were examined for general practitioners, all of which were negative for organisms of the "enteric" group. From County hospitals 94 urines were examined, *B. paratyphosus* B. being found present in one sample.

Widals.—62 specimens of blood were examined for the Widal reaction, of which 5 were positive to *B. typhosus* and 25 were positive to *B. paratyphosus* B.

Blood Cultures.—3 blood cultures gave negative results for *B. typhosus* and allied organisms.

Miscellaneous Examinations.

General bacteriological or chemical examinations were made on 387 specimens of various kinds.

Urines.—129 specimens of urine were examined, 103 specimens being examined for *B. coli*, from which 77 positive results were obtained. 19 urines were examined for albumen, of which 14 were positive, while 6 urines were examined for glucose with negative results. The urea content was estimated in a single sample.

Fæces.—4 specimens of fæces were examined for occult blood, a positive result being obtained in 1 sample.

Pleural Effusions.—2 effusions were examined for the causal organisms. In 1 sample a streptococcus was the organism present.

Blood.—56 blood films were examined for anæmia or pernicious anæmia. In 32 films simple anæmia was noted, while in 24 films the condition was that of pernicious anæmia. In the latter number of films the blood was repeatedly taken from the same case. 8 blood films were examined for malaria, 1 of which gave positive results. Blood counts were performed in 4 cases, while the urea concentration was estimated in a sample of blood.

Pus.—16 specimens of pus were examined for the causal organism. In 8 specimens the causal organism was a streptococcus; in 7 specimens staphylococcus aureus; while in 1 specimen actinomyces bovis was the cause.

30 specimens of pus were examined for the gonococcus, from which 14 positive results were obtained.

Ascites.—1 ascitic fluid was examined, but the causal organism was not isolated.

Cerebro-Spinal Fluids.—3 specimens were examined, in 1 of which the pneumococcus was the causal organism, no organisms being isolated in the remaining 2 specimens.

Mycosis.—2 specimens of hair were examined, in 1 of which a positive result was obtained.

Milks.

B. Tuberculosis.—44 samples of milk were examined for tubercle bacilli, and in 10 samples this organism was found to be present.

Milk Counts.—37 samples of milk were examined for their bacterial content. Of these, 15 samples were of Grade A certified milk. The samples were of excellent quality and showed a very high standard of bacterial purity. The remaining 22 samples were from ordinary commercial sources, and, with 2 exceptions, the milks showed a satisfactory standard of cleanliness. The gross dirt in a sample of milk was estimated, and the condition of this milk was not satisfactory.

Waters.—10 samples of water were examined bacteriologically. 7 were of a satisfactory standard; 2 were of fair quality; while 1 sample was unsatisfactory.

B. Anthracis.—10 blood films were examined for this organism, and in 8 films positive results were obtained. Cultures were made from 7 swabs, and in 5 cases *B. anthracis* was isolated.

Sheep Scab.—3 specimens of wool were examined with negative results.

Vaccines.—19 autogenous vaccines were prepared from causal organisms for the treatment of boils and other ailments.

The following table (Table III.) shows the miscellaneous examinations made during the year :—

TABLE III.

	B. Coli.		Albumen.		Glucose.		Urea.	Total.
	+	—	+	—	+	—		
Urines	77	26	14	5	—	6	1	129
Fæces Blood	1	3						4
Pleural Effusions	1	1						2
	Anaemia.		Pernicious Anaemia.		Malaria.		Counts.	Urea.
					+	—		
Blood Films	32		24		1	7	4	69
	Strep-tococci.		Staphylococci.		Gonococci.		Actinomyces.	
					+	—	+	—
Pus	8		7		14	16	1	—
Ascites, Cerebro-Spinal Fluids, Mycosis								6
	T.B.		Counts.		Gross Dirt.			
	+	—						
Milks	10	34		37		1		82
Waters				10				10
	Films.		Cultures.					
	+	—			+	—		
B. Anthracis	8	2			5	2		17
Sheep Scab		3						3
Autogenous Vaccines								19
								387

Examinations under the Tuberculosis Scheme.

520 specimens were received for examination during the year, of which 410 were specimens of sputa.

From Newhills Convalescent Home 104 sputa were received; 74 giving positive results, while 30 specimens were negative.

General practitioners had 270 sputa examined, of which 49 were positive and 221 were negative.

The County Medical Officers had 10 sputa examined with 3 positive results.

From the various hospitals in the County 26 specimens were received, 8 of which were positive.

The following table (Table IV.) shows the numbers of sputa examined and the sources:—

TABLE IV.

	SPUTA.		
	+	...	—
Newhills,	74	...	30
General Practitioners,	49	...	221
County Medical Officers,	3	...	7
County Hospitals,	8	...	18
	134	...	276

Urines.—33 specimens of urine were examined for T.B., of which 4 were positive.

Fæces.—4 samples of fæces gave negative results.

Pleural Effusions.—4 pleural effusions were negative.

Cerebro-Spinal Fluid.—2 specimens were examined for T.B., both with negative results.

Autogenous Vaccines.—67 autogenous vaccines were prepared during the year from specimens of sputum.

The following table (Table V.) shows the number and nature of examinations made under the Tuberculosis Scheme.

TABLE V.

	+	—
Sputa	134	276
Urines	4	29
Fæces	—	4
Pleural Effusions	—	4
Cerebro-spinal Fluid	—	2
Autogenous Vaccines	—	67
	138	315
		67

Vaccines, Sera.

During 1929 there were issued to general practitioners and hospitals:—

Diphtheria Anti-toxin.			Diphtheria Anti-toxin—Concentrated.		
1,000 units	...	48 vials	2,000 units	...	136 vials
2,000	„	69 „	3,000	„	52 „
3,000	„	110 „	4,000	„	259 „
4,000	„	109 „	5,000	„	35 „
			6,000	„	70 „
			8,000	„	36 „
Tetanus Anti-toxin			127 vials		
Anti-Gas Gangrene Serum			3 „		
Anti-Streptococcal Sera—					
Erysipelas			22 „		
Puerperal			18 „		
Polyvalent			18 „		
Scarlet Fever			66 „		
Vaccines—					
T.A.B.			42 doses		
Influenza			12 „		

Aberdeen, 31st January, 1930.

Section IX.

VETERINARY SERVICES.

REPORT BY COUNTY VETERINARY INSPECTOR ON THE OPERATION OF THE MILK AND DAIRIES (SCOTLAND) ACT, 1914.

In reviewing the work done in carrying out the requirements in terms of the above Act during 1929, very little more can be said than was done in the previous Report for 1928. As will be seen, when the detailed statement of the visits to the districts and burghs is examined, there is very little difference in the number of visits paid to the dairy farms. A slightly larger number of cows has been examined although fewer visits have been made, the reason for the difference being that farms have been visited on which a larger number of cows has been kept. It will be noted that fewer visits have been made in the Deer District, the reason for the decrease being that the roads were rendered impassable for a considerable time just when the bulk of the visits were due to be made.

The season during which the cows were housed seemed to be very short in 1929 as no routine farm-to-farm inspection could be carried out after the first week in May, and only a herd here and there was housed before the first week in November.

Much time was wasted during the month of October in futile visits to farms where the cows were found to be at grass, when one would normally have expected to find them indoors. In spite of the many hindrances encountered, most of the dairy farms were visited once, and in the case of the Burghs, three visits were made, but it is obvious that no improvements in the dairy inspection can be obtained when a prolonged snowstorm or a fine autumn can render a once yearly inspection impossible.

Improvement can only be obtained by more frequent inspection, and that can only be carried out if some additional help is given. A county of 2,000 square miles cannot be adequately supervised by one inspector, the distances to be covered preclude the possibility. One inspection is not enough. All the herds should be inspected at least twice during the autumn and winter months, when there is the greatest possibility of disease amongst the animals, and the greatest need for grooming and attention to the hygienic side of the dairying industry. An attempt should also be made to inspect at least some of the herds in the summer months, and as routine inspection is precluded on account of the cows being turned out to grass immediately milking is finished, an inspector would have to be domiciled in the neighbourhood of a district in which a large number of dairy farms is situated, so that he might be able to make evening visits and yet keep the travelling expenses at a reasonably low figure in proportion to the work done.

Besides the more frequent inspection of registered dairy farms, an attempt ought also to be made to inspect all cows and premises from which milk is sold. There are many such in the neighbourhood of small country villages which have been neglected up to date, and yet there is perhaps more real need for the regular inspection of these unregistered sellers of milk than of the large dairy farmer. The registered dairy farmer has made a study of his trade, and dairying is his means of livelihood, and he knows it is only by keeping a good class of cow free from disease and by attending to the hygienic side of his trade that he can hope to sell his milk. He also knows that his premises and cows are liable to inspection at any time. These unregistered sellers of milk, on the other hand, very often have no idea of milk hygiene, no knowledge of when a cow is diseased, and even when they do know their cow is unhealthy, have not the means to dispose of her and replace her with a healthy one. Very often

also, the selling of milk is merely a side-line and very little care is taken to see that the purchaser obtains good, clean milk. The cows and premises of these people must be inspected, but it cannot be done at all regularly without assistance. An attempt was made to inspect some of the unregistered dairies during the year and it was found that some were actually liable to registration, having a fairly large number of cows, but the farmers understood that no registration was required so long as they did not send milk away in cans or sell it from a cart.

The farms on which butter is made in any quantity also require to be inspected occasionally as the quality of the butter produced is very poor in a large number of cases. It would not be possible to visit annually all the farms on which butter is made, as practically every farm and croft produces butter at some time during the year, but the mere fact that such inspections were being made would tend to improve the hygienic conditions as far as the actual handling of the milk and butter is concerned, and enable the inspectors to eliminate diseased cows in larger numbers than is the case at present. Much could be done to improve conditions by giving the more ignorant some idea of the hygienic precautions required before good butter could be obtained, as there are many curious ideas regarding the necessities for the production of good butter. It has been found, for example, that some have a special cream jar which is never washed, the inner surface of the jar showing a very uneven appearance, caused by the series of rings formed by many hardened layers of solidified cream deposited on the jar. This jar and its condition is considered necessary for the "ripening" of the cream. Other experts keep the cream jar in the not always too clean kitchen which the family use as a living room, and in some cases as the sleeping room as well.

Inspection of Non-Registered Dairies.

As has been said, an attempt was made to inspect some non-registered dairies during the year, but such inspections can only be satisfactory when there is a hope that they can be sufficiently widespread and numerous. Too few inspections only cause a feeling of dissatisfaction amongst the inspected, when it is learned that a neighbour has been missed.

There have been no difficulties in the administration of the Milk and Dairies Act as far as the actual work of the Inspector was concerned.

Number of cows examined (in milk)	.	.	.	9,852
„ „ (dry)	.	.	.	1,828
Total				11,680
Number of visits	.	.	.	849

General Condition and Cleanliness of Cows.

The condition and cleanliness of the cows has been maintained at the same high level as in previous years. More frequent grooming is being carried out, at any rate on the larger dairy farms. On the smaller farms, the cleanliness and grooming of the cows is not so satisfactory in many cases. The reason for this is that the cowkeeper is also expected to do other work on the farm and only his spare moments are devoted to the grooming of the cows. On these farms an endeavour has been made to get the farmer to clip the hindquarters and udders of the cows, as the work of keeping the cows clean could then be halved.

It is extremely difficult to persuade some of the farmers to depart from their normal routine, but it is hoped that in time most of them may see the benefit of daily grooming. Many maintain that it is dangerous to clip the udders and flanks of cows as they are thereby rendered more liable to contract mammitis. These firmly rooted prejudices die hard, but those who have begun the practice of daily grooming and the clipping of the hair would never give it up, and it is hoped that in time they may convince the others.

Methods of Feeding.

There have been some slight changes in the methods of feeding. A larger number of farmers are now giving their cows a feed twice daily, and they find that there is no decrease in the milk yield. The cows remain in as good condition, and they seem to have less sickness. They are given the same quantity of food in the two feeds, but the times of feeding are now more regularly spaced and the cows obtain far more rest and time to ruminate their food.

Less draff was also used, the farmers preferring to use their corn rather than sell it at the price prevailing in 1929.

More farmers are also adopting a modified form of "balanced ration" feeding. They find that this method, when combined with the recording of the milk yield of individual cows, is much more satisfactory than the old way of giving all the cows the same ration regardless of their milk yield.

Methods of Dealing with Diseased Cows.

The diseases encountered during the course of the inspections of cattle, apart from tuberculosis, were as follows :—

Mastitis	126
Atrophy	109
Eruption	20
Suspected tuberculous mastitis	40
Suppurating udders and teats	3
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Total	298
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The cows affected were removed from the herds temporarily or permanently as the case required. In the cases where the cows were suspected to be suffering from tuberculous mastitis the milk was destroyed until a diagnosis had been made.

Tuberculosis in Dairy Cows.

During the year, 61 dairy cows on registered dairy farms which were found to be tuberculous within the meaning of the Tuberculosis Order, were dealt with in terms of that Order.

The forms of tuberculosis found were as follows :—

Tuberculosis of the udder	22
Tuberculosis with chronic cough	29
Tuberculous emaciation	10
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Total	61
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In twelve of the cases of tuberculosis of the udder, diagnosis was made solely on the results of clinical examination as there were also symptoms of tuberculosis in the lungs.

Milk Samples.

During the year, 40 samples of milk were taken from cows suspected to be suffering from tuberculous mastitis, and examined microscopically and biologically. Ten samples were found positive and the cows were immediately slaughtered. All ten cases were diagnosed by microscope and found positive on *post-mortem* examination. Two of the cows showed no lesions other than those in the mammary gland.

Inspection of Cowsheds.

Generally speaking, the sanitary condition of the dairy premises has been satisfactory. The alterations carried out have rendered the cleaning of the byres a much simpler matter than was the case three years ago, but the regular cleaning of the upper parts of the cowsheds might yet be improved considerably.

Improvements to Cowsheds.

All the necessary alterations to the cowsheds, &c., are being slowly completed, but the work will have to be very gradual as the farming industry is at a very low ebb at present and neither the landlords nor the farmers are able to expend money on anything but the bare necessities.

Very few byres require to be altered in the Deer District now. All the byres in Turriff have been altered, with one exception, and alterations to the latter are to be completed in 1930.

A considerable number of farmers have had individual drinking bowls installed, and they are all convinced that the expenditure will be amply repaid in the improved condition of their cows.

Summary of Visits of Inspection in the Districts and Burghs.

DISTRICTS AND BURGHS.	Number of Visits.	Cows in Milk.	Cows (dry).	TOTAL.	Tuberculous Udder.	Mammitis.	Atrophy.	Eruptions.	Suppurating Conditions.	T. B. Chronic Cough.	T. B. Emaciation.
Aberdeen District .	354	4,429	749	5,178	10	65	53	7	2	14	1
Deer " .	90	910	183	1,093	3	7	9	5	—	3	2
Ellon " .	78	1,457	257	1,714	3	15	27	3	—	5	4
Garioch " .	55	879	147	1,026	2	17	8	4	—	1	1
Deeside " .	52	397	111	508	2	7	4	1	—	3	1
Turriff " .	42	538	118	656	—	3	2	—	—	1	—
Huntly " .	22	312	60	372	—	5	2	—	—	—	1
Alford " .	18	126	47	173	2	2	1	—	—	2	—
Fraserburgh Burgh	63	369	75	444	—	3	1	—	—	—	—
Peterhead " .	12	144	18	162	—	—	—	—	—	—	—
Rosehearty " .	30	111	12	123	—	—	—	—	—	—	—
Huntly " .	12	51	18	69	—	—	1	—	—	—	—
Turriff " .	15	51	21	72	—	—	1	—	—	—	—
Oldmeldrum " .	3	36	6	42	—	2	—	—	1	—	—
Kintore " .	3	42	6	48	—	—	—	—	—	—	—
Total .	849	9,852	1,828	11,680	22	126	109	20	3	29	10

